

Snowstorm 2020 Local Roadway Snow Removal Initiative

ISSUE

Snow grading undertaken to restore basic mobility along local roadways (non-priority streets) after the snowstorm that occurred between November 7 and 9, 2020 has resulted in large snow piles along the edges of these roadways. All residential neighbourhoods remain impacted by snow piles that affect driving lane width and on-street parking availability.

BACKGROUND

Freezing rain and then a severe snowfall occurred between November 7 and 9 with an estimated 35 to 38 cm of snowfall, which was combined with severe winds causing drifting. For context, the highest one-day snowfall in November on record is 19.1 cm set on November 19, 1946.

Several snow events have occurred since the snowstorm ended on November 9, with Environment and Climate Change Canada reporting 53 cm of snow in Saskatoon as of November 20, coming close to the maximum record amount of snowfall for November of 57.4 cm set in the 1940s. The average snowfall for Saskatoon in November is around 13 cm with an average of 93 cm per year of snow. Saskatoon has already received over half of the annual snowfall in a two-week period.

The winter storm between November 7 and 9 resulted in heavy snow accumulation on all city streets. Without snow grading, streets were not reasonably passable for many light vehicles.

During the first few days after the snowfall, snow grading focused on priority streets. Starting on November 11, snow grading of local roadways (i.e. streets that are not on the priority street system for winter road maintenance) began. This work involved contractor crews working 24 hours a day, seven days a week, in addition to City crews. This work included grading and pushing the snow to remove the snowfall accumulation and drifting and then placing the snow in piles in the parking lanes, medians or boulevards. Snow was placed in piles because it made it faster to get all local streets graded. It was important to get this work done quickly to restore basic mobility across the entire city.

At its meeting held on November 23, 2020, the Governance and Priorities Committee received a report titled “Snowstorm 2020 Response Update” that provided an update on the City’s response to the snowstorm of November 7 to 9, 2020, including the November 19 snow event.

CURRENT STATUS

Snow grading to restore basic mobility on City priority streets, industrial streets and residential streets has been completed, with crews returning to problem areas as they are identified. Snow removal of snow piles and windrows (ridges of snow along the

sides of the streets, in the middle of the streets in some of the BIDs, and in medians and boulevards) in school zones and the Business Improvement Districts (BIDs) has also been completed.

Snow removal is underway to remove windrows (snow ridges) from priority streets to provide storage space for additional snowfalls, open blocked crosswalks, improve sightlines and prevent drifting/spilling into driving lanes.

DISCUSSION/ANALYSIS

Timing for Commencement of Local Roadway Snow Removal Activities

Snow removal on priority streets will require multiple weeks of effort (i.e. approximately two months). Therefore, snow removal on local roadways will need to proceed in parallel with snow removal on priority streets and be resourced by hiring of additional contractors.

The local roadway snow removal initiative will commence the week of November 30, 2020.

Local Roadway Snow Removal Contracts

Procurement of local roadway snow removal contracts is currently in-market, with the contracts projected to be awarded the week of December 7, 2020. In the interim period, until the formal local roadway snow removal contracts are awarded, existing snow grading contractors already under contract with the City will be leveraged to begin this work the week of November 30.

Local Roadway Snow Removal Level of Service

Snow removal on local roadways will be focused on loading out snow piles and windrows to establish typical winter condition driveability of the street and improve parking availability in front of homes and properties, as well as sight lines at intersections. To mitigate the overall cost of this initiative, snow piles on local roadways that are not impacting drivability or on-street parking in front of houses, such as snow located on boulevards and medians, along vacant lots or open spaces, and along the flankage (e.g. sides) of lots is planned to remain in place for the duration of the winter.

The quality of completed work will be the same as what is achieved with snow removal in school zones, where the vast majority of snow volumes are removed. This quality standard has proven very effective in these high traffic areas in front of schools and as such will be used as the standard for removal on residential streets. Bare pavement conditions are not part of this standard, as minor volumes of snow will remain on the street. The standards of work to be employed are:

- 1) remove snow piles on both sides of local roadways along lot frontages, and at intersection corners;
- 2) in any areas where the windrow is not removed (i.e. flankages and boulevards), remove snow adjacent to fire hydrants;
- 3) remove snow piles and windrows located in bulbs of cul-de-sacs;

- 4) any snow piles or ridges purposefully left in place cannot encroach into driving lanes; and
- 5) snow piles from initial response encroaching on sidewalks will be cleared by crews when roadway snow is addressed.

It's important to note that this snow removal initiative on residential streets is in response to the excessive snow accumulation as a result of the November snow events. This was an atypical event which requires a significantly different response than a typical winter.

Snow Removal Schedule

The local roadway snow removal initiative, based on estimated contractor availability and snow removal volumes, will result in an approximately two-month schedule, with completion targeted for the end of January 2021. Up to five contractor crews are planned to be initially assigned to this initiative. As the City has not undertaken an initiative of this magnitude, the rate of progress that can be expected by snow removal crews is not possible to accurately predict at this time. Therefore, overall city-wide progress will be assessed regularly, and additional contractors brought in if/as required to endeavour to maintain the overall schedule. Consistency, coordination with such things as garbage and recycling service, and quality control is an important part of the proposed approach.

For residential streets, the work will be initially planned to be undertaken during the day as less cars are typically utilizing on-street parking during the day and to prevent nighttime noise disruption to residents. If progress is slower than anticipated and additional contractor crews are limited, night work may be considered, although this is not preferred.

Of note, snow removal on priority streets is targeted for completion within the same schedule. This may require additional resources (i.e. equipment for Roadways, Fleet & Support and/or more contractor support) to be applied to priority streets, particularly in the event of frequent and/or large snow events occurring before snow removal activities from the November snow events are complete. Snow removal on priority streets is typically undertaken during nights as less traffic is on the streets resulting in safer operations and higher production rates for the snow removal.

Neighbourhood Snow Removal Sequencing

There are numerous different strategies that could be used to deploy snow removal crews throughout the city, each with its own benefits and drawbacks. With the work to reinstate basic mobility on local roadways complete, all neighbourhoods remain impacted by snow piles that affect full driving surface and on-street parking availability. As the snow removal initiative is expected to take up to two months, it is important to establish the sequence of neighbourhood snow removal in a balanced and fair manner. Therefore, the sequence of neighbourhoods will be selected randomly, balanced by Ward. Early the week of November 30, the city-wide neighbourhood sequencing and neighbourhoods scheduled for removal that week will be posted. Once the

Administration is able to more accurately assess the rate of progress following the first week of work, a schedule will be posted on the City's website for all neighbourhoods indicating the week residents may anticipate snow removal crews in their neighbourhood. This schedule will be regularly reviewed and updated to reflect any potential changes as a result of additional snowfall events or other variables that may impose an acceleration or delay to the planned start week for snow removal in each neighbourhood. Residents will be reminded to check the schedule frequently as the sequencing approaches their neighbourhood.

Signage will be posted in the neighbourhood a minimum of 24 hours in advance of the planned work to allow for planning and certainty for residents.

Considerations for Parked Cars

Initial work to reinstate basic mobility on local roadways was complicated by parked vehicles, which in some cases resulted in the quality of work not meeting the expectations of residents, and in many cases, required follow-up efforts to ensure basic mobility. By limiting work to the daytime, on-street parking should be less of an issue.

In order to provide snow removal crews the opportunity to clean up local roadways as best as possible, advanced warning and towing without ticketing will be employed. For reference, the annual Spring Sweep program, using ticketing and towing, typically takes more than a month of planning and requires a minimum of 36 hours' notice with No Parking signage. For this initiative, the City's goal is to start the snow removal program the week of November 30 and maintain flexibility in adjusting to the contractor's progress for the work within neighbourhoods.

Contractor crews are likely to require several days of effort to complete snow removal in each neighbourhood, and highly variable conditions in each neighbourhood will make it difficult to provide a definitive advance schedule with firm start and end dates for work in each neighbourhood. The City is planning a minimum of 24 hours' advance notice with No Parking signage to let the public know when to expect crews on their street and move parked vehicles. As much as practically possible, efforts will be taken to provide people with reasonable access to alternate locations to park, similar to the approach taken with the Spring Sweep program.

FINANCIAL IMPLICATIONS

Early estimates for snow grading and removal, sanding, salting and de-icing costs for this event are expected to exceed the 2020 Snow and Ice Service Line budget by \$10.0 million.

The estimated cost for the local roadway snow removal initiative outlined in this report is estimated between \$6 million and \$7 million based on the calculated volume of snow piles that are projected to be removed. The total costs in responding to this snow event will be spread across 2020 and 2021 with the splits between the two years dependent on contractor progress and future snow events. There is a risk that this cost estimate for local roadways snow removal will be exceeded if one or more large snow events

occur before the completion of this initiative. If removal of snow piles along the flankage of lots is to be added to the planned level of service, the cost estimate for the local roadway snow removal initiative is estimated to increase by \$600,000 to \$1.75 million.

In order to partially offset this event, \$3.45 million will be used from the Snow and Ice Management Contingency Reserve, which will deplete the reserve. Additional costs for the snowstorm response will be incurred in 2021, including the local roadway snow removal initiative which will continue into the new year. The Administration is currently determining the estimated work and cost for 2021 and will report back in December 2020 once more is known about actual costs and production rates.

The 2021 budget has not been adjusted for this additional cost that will spill over into the new year. As the budget is based on average levels of snowfall, there is uncertainty of what will occur. Adding base budget to cover a one-time snow event is normally not a standard financial practice. While this will put early pressure on the 2021 snow budget there is a possibility that it could be absorbed in the existing budget. Other unknowns that factor into this strategy are the potential of federal assistance in 2021 similar to the Safe Restart funding in 2020 and the uncertainty of other 2021 budgeted COVID-19 related impacts that are based on ever changing assumptions that may or may not materialize. The City is assuming some budget risk in this program however should a year-end deficit occur in 2021, one strategy to fund the deficit would be to consider a one-time reduction in reserve contributions to avoid increasing property taxes in the following year.

OTHER IMPLICATIONS

There are no privacy, legal, social, or environmental implications identified.

NEXT STEPS

On December 1, the Administration's intent is to release the city-wide sequence of neighbourhood snow removal, and the neighbourhoods scheduled for that week. In addition, external communications will be initiated, including signage, social media, radio ads, and the City's website. After the first week of work, the schedule on the City's website will be updated to notify residents of the anticipated week work may begin in their neighbourhood.

The Administration will provide a follow-up report in December 2020, which will describe the estimated work and cost for 2021 as a result of the response to these November snow events.

Report Approval

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